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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,281	04/20/2004	Masanao Furukawa	D-1598	2638

7590 08/29/2006

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EXAMINER
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KRISHNAMURTHY, RAMESH

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/827,281	<b>Applicant(s)</b> FURUKAWA, MASANAO	
	<b>Examiner</b> Ramesh Krishnamurthy	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,5,6,7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3753

This office action is responsive to communications filed 04/20/2004.

**Claims 1, 3 and 4 – 7 are pending.**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3 and 4 – 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Each of the claims 1 and 4 recite the limitation “ so that flow amount or pressure in the flow path can be controlled at a predetermined value by the first and second pressure detecting means”. This limitation is confusing in that pressure detecting means can only detect pressure but cannot control the pressure.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by the Admitted Prior Art disclosed in Figure 4.

In Fig. 4, pressure sensor (15) is being read as comprising a pressure detecting means on the upstream side corresponding to p1 (in Fig. 4) and a pressure detecting means on the downstream side of the flow resistance (14). A bomb (1) for fluid supply is also disclosed. The remaining elements recited in the claims are clearly disclosed in

Art Unit: 3753

Figure 4. The limitation “for carrying out a predetermined calculation based on signals from the differential pressure detecting means and the pressure detecting means for controlling the opening degree of the control valve based on a result of the calculation” is a functional limitation that the control portion (10) in Fig. 4 is capable of.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant admitted prior art (APA) as applied to claims 1 and 3 above, and further in view of Shoji (US 5,952,556) or Wang et al. (US 5,524,084) or JP 8-101176.

The disclosure in Fig. 4 together with the corresponding description in the instant application discloses the claimed invention with the exception of explicitly disclosing a pressure detecting means attached to the flow path between the flow resistance and the sample introducing part or between the flow resistance and the control valve for detecting a pressure thereat.

Claim 1 in Shoji pertains to a gas chromatograph having a pressure sensor attached to the flow path that is “situated away from the control valve”. This limitation includes all locations of the pressure sensor along the flow path including that between the flow resistance and the sample introducing part or between the flow resistance and the control valve for detecting a pressure thereat, as claimed in the instant claims.

Wang et al. discloses a pressure sensor (420) connected to the flow path in a gas chromatograph for the purpose of ascertaining the pressure thereat of the gas flowing therethrough. The specific location of the pressure sensor upstream of the flow sensor as recited in claim 5 (instead of the disclosed location of downstream of the flow sensor) is regarded as merely a design expedient that provides no new and/or unexpected result over those features disclosed in Wang et al. It is further noted that the flow sensor (416) is equivalent to the combination of a flow resistance combined with a differential pressure sensor as recited in the instant claims.

The document JP'176 discloses a pressure sensor (1b) disposed between the control valve (1a) and the flow resistance (2a) for the purpose of providing a value of the pressure thereat.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the device disclosed in APA a pressure detecting means attached to the flow path between the flow resistance and the sample introducing part or between the flow resistance and the control valve for the purpose of detecting a pressure thereat as recognized by Shoji (US 5,952,556) or Wang et al. (US 5,524,084) or JP 8-101176, as noted above.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims rejected above have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 3753

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

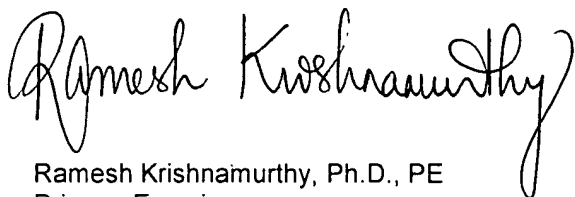
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 – 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Nicolas, can be reached on (571) 272 – 4931. The fax phone number for the organization where this application or proceeding is assigned is (571) 273 – 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 3753

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Ramesh Krishnamurthy". The signature is written in a cursive, flowing style with a large initial 'R'.

Ramesh Krishnamurthy, Ph.D., PE  
Primary Examiner  
Art Unit 3753